

WHAT IS CLAIMED IS:

1. A magnetic tape comprising:

a longitudinally extending nonmagnetic support;

a magnetic layer formed by depositing a plurality of  
5 evaporated magnetic films, each having an oblique column-like  
structure, on a principal surface of said nonmagnetic support  
so that a growth direction of each of said deposited evaporated  
magnetic films is opposite to said longitudinal direction;

a protective layer formed on said magnetic layer; and

10 a backcoating layer formed on the other surface of said  
nonmagnetic support, wherein:

a heat-shrinkage ratio in said longitudinal direction  
and a width direction is defined to be 0.50% or less; and

a humidity expansion coefficient is defined to be  $1 \times$   
15  $10^{-6}/\%$  RH or less after stock at 100 °C and 5 %RH for 30 minutes.

2. The magnetic tape according to claim 1, wherein:

a thickness of said nonmagnetic support is defined to  
be 4.0  $\mu\text{m}$  to 10.0  $\mu\text{m}$  so that said heat-shrinkage ratio and said  
humidity expansion coefficient satisfy said conditions.

20 3. The magnetic tape according to claim 1, wherein:

a thickness of said magnetic layer is defined to be 10  
nm to 75 nm so that said heat-shrinkage ratio and said humidity  
expansion coefficient satisfy said conditions.

4. The magnetic tape according to claim 1, wherein:

25 a ratio of a total thickness of said magnetic tape to  
a thickness of said magnetic layer is defined to be 1000 or  
less so that said heat-shrinkage ratio and said humidity  
expansion coefficient satisfy said conditions.

5. The magnetic tape according to claim 1, wherein:

30 a width of said magnetic tape is defined to be 1.27 cm.

6. The magnetic tape according to claim 1, wherein:  
a thickness of said nonmagnetic support is defined to  
be 4.0  $\mu\text{m}$  to 10.0  $\mu\text{m}$ ;

a thickness of said magnetic layer is defined to be 10  
5 nm to 75 nm; and

a ratio of a total thickness of said magnetic tape to  
a thickness of said magnetic layer is defined to be 1000 or  
less so that said heat-shrinkage ratio and said humidity  
expansion coefficient satisfy said conditions.